

IN THE CLAIMS:

Please amend claims 1, 17 and 33, cancel claim 34 without prejudice or disclaimer and add claims 35-38 as follows.

1. (Currently Amended) A radio resource control method in a mobile communication system, comprising:

camping, in an idle state, on a serving cell formed by a serving base station;

~~receiving, in the user equipment, control information for controlling cell change procedures of the user equipment, said cell change being conducted from the serving cell to a target cell; and~~

~~performing, in the user equipment, the cell change procedures based on the received control information;~~

adjusting, in a network element of the mobile communication system before the control information is received, at least one element of said control information according to a predetermined time pattern comprising time elements having a characteristic profile in terms of the state of the mobile communication system, thus forming adjusted control information, wherein the control information controls cell change procedures of a user equipment camping in the idle state on the serving cell; and

receiving, in the user equipment, the adjusted control information for controlling cell change procedures of the user equipment, said cell change being conducted from the serving cell to a target cell; and

performing, in the user equipment, the cell change procedures based on the received control information; and

controlling the cell change procedures based on said adjusted control information, wherein at least one ~~neighbour~~neighbor cell is formed by a ~~neighbour~~neighbor base station and the user equipment capable of receiving signals from said base stations.

2. (Previously Presented) The method of claim 1, further comprising adjusting at least one element of the idle state control information.

3. (Previously Presented) The method of claim 1, wherein performing the cell change procedures comprises:

selecting the target cell based on the adjusted control information; and
camping on the target cell.

4. (Previously Presented) The method of claim 1, wherein performing the cell change procedures comprises:

measuring the quality of the serving cell;
measuring the quality of at least one ~~neighbour~~ cell;
ranking the measured cells based on the measured quality of the serving cell and the measured quality of the ~~neighbour~~ cell; and
selecting the target cell based on the ranking.

5. (Previously Presented) The method of claim 1, further comprising adjusting at least one quality threshold of the serving cell; and

wherein performing the cell change procedures comprises:

measuring the quality of the serving cell;

triggering measurements on the neighbour cell based on the measured quality of the serving cell and the quality threshold of the serving cell; and

selecting the target cell based on the triggered measurements.

6. (Previously Presented) The method of claim 1, further comprising:

camping on the serving cell that uses a different carrier frequency from that used by the neighbour cell;

adjusting at least one inter-frequency measurement threshold; and

wherein performing the cell change procedures comprises:

measuring the quality of the serving cell;

triggering inter-frequency measurements on the neighbour cell based on the measured quality of the serving cell and the inter-frequency measurement threshold; and

selecting the target cell based on the inter-frequency measurement.

7. (Previously Presented) The method of claim 1, further comprising:

camping on the serving cell that uses a different radio-access technology from that used by the neighbour cell;

adjusting an inter-radio access technology measurement threshold; and
wherein performing the cell change procedures comprises:
measuring the quality of the serving cell;
triggering inter-radio access technology measurements on the neighbour cell
based on the measured quality of the serving cell and the inter-radio access technology
measurement threshold; and
selecting the target cell based on the inter-radio access technology measurement.

8. (Previously Presented) The method of claim 1, further comprising adjusting at
least one quality threshold of the neighbour cell; and
wherein the performing, in the user equipment, of the cell change procedures
comprises:
measuring the quality of the serving cell;
triggering measurements on the neighbour cell based on the measured quality of
the serving cell;
measuring the quality of the neighbour cell;
forming the candidate cell selection based on the measured quality of the
neighbour cell and the quality threshold of the neighbour cell; and
selecting the target cell based on the candidate cell selection.

9. (Previously Presented) The method of claim 1, further comprising adjusting at least one quality offset of the serving cell; and

wherein the performing, in the user equipment, of the cell change procedures comprises:

measuring the quality of the serving cell;

applying the quality offset of the serving cell to the measured quality of the serving cell, thus obtaining an offset-applied quality of the serving cell;

measuring the quality of at least one neighbour cell; and

selecting the target cell based on the measured quality of the neighbour cell, and the offset-applied quality of the serving cell.

10. (Previously Presented) The method of claim 1, further comprising adjusting at least one quality offset of the neighbour cell; and

wherein the performing, in the user equipment, of the cell change procedures comprises:

measuring the quality of the serving cell;

measuring the quality of at least one neighbour cell;

applying the quality offset of the neighbour cell to the measured quality of the neighbour cell, thus obtaining an offset-applied quality of the neighbour cell; and

selecting the target cell based on the measured quality of the serving cell and the offset-applied quality of the neighbour cell.

11. (Previously Presented) The method of claim 1, further comprising adjusting at least one temporary quality offset of the neighbour cell and a penalty time of the neighbour cell; and

wherein the performing, in the user equipment, of the cell change procedures comprises:

measuring the quality of the serving cell;

measuring quality of at least one neighbour cell;

applying the quality offset of the neighbour cell to the measured quality of the neighbour cell for the duration of the penalty time, thus obtaining a temporary offset-applied quality of the neighbour cell; and

selecting the target cell based on the measured quality of the serving cell and the temporary offset-applied quality of the neighbour cell.

12. (Previously Presented) The method of claim 1, further comprising adjusting at least one element of the control information to assumed capacity requirements of the mobile communication system.

13. (Previously Presented) The method of claim 1, further comprising adjusting at least one element of the control information based on assumed cell load of the serving cell.

14. (Previously Presented) The method of claim 1, further comprising:
camping, on the serving cell belonging to the same hierarchical cell structure as the neighbour cell;
adjusting the prioritising information of hierarchical cell structure;
re-prioritising the cells in a hierarchical cell structure using the adjusted prioritising information; and
performing the cell change procedures based on the re-prioritising information.

15. (Previously Presented) The method of claim 1, further comprising camping in one of the following idle states specified in third generation partnership project specifications: idle mode, CELL_FACH state, URA_PCH state, CELL_PCH state.

16. (Previously Presented) The method of claim 1, further comprising camping on the serving cell controlled by a base station controller different from the base station controller controlling the neighbour cell.

17. (Currently Amended) A mobile communication system, comprising:
a network part for providing the fixed infrastructure of the mobile communication system,
the network part comprising a serving base station for forming a serving cell and a neighbour base station for forming a neighbour cell;

a user equipment comprising a receiving device configured to receive signals from the serving base station and from the neighbour base station;

the network part further comprises a control device configured to control cell change procedures with control information, said cell change being conducted from the serving cell to a target cell;

the user equipment further comprising a cell change procedure device configured to perform cell change procedures based on control information received from the network part;

wherein the receiving device and the cell change procedure device are configured to camp on the serving cell in an idle state; and

wherein the network part further comprises an adjusting device configured to adjust at least one element of said control information according to a predetermined time pattern comprising time elements having a characteristic profile in terms of the state of the mobile communication system, thus forming adjusted control information.

18. (Previously Presented) The mobile communication system of claim 17, wherein the adjusting device is configured to adjust at least one element of the idle state control information.

19. (Previously Presented) The mobile communication system of claim 17, wherein the cell change procedure device is configured to select the target cell based on the adjusted control information; and

wherein the receiving device and the cell change procedure device are configured to camp on the target cell.

20. (Previously Presented) The mobile communication system of claim 17, wherein the receiving device and the cell change procedure device are configured to measure the quality of the serving cell based on the adjusted control information;

wherein the receiving device and the cell change procedure device are configured to measure the quality of at least one neighbour cell based on the adjusted control information;

wherein the cell change procedure device are configured to rank the measured cells based on the measured quality of the serving cell, the measured quality of the neighbour cell, and the adjusted control information; and

wherein the cell change procedure device is configured to select the target cell based on the ranking.

21. (Previously Presented) The mobile communication system of claim 17, wherein the adjusting device is configured to adjust at least one quality threshold of the serving cell;

wherein the receiving device and the cell change procedure device are configured to measure the quality of the serving cell;

wherein the cell change procedure device is configured to trigger measurements on the neighbour cell based on the measured quality of the serving cell and the quality threshold of the serving cell; and

wherein the cell change procedure device is configured to select the target cell based on the triggered measurements.

22. (Previously Presented) The mobile communication system of claim 17, wherein the receiving device is configured to operate at different carrier frequencies;

wherein the adjusting device is are configured to adjust at least one inter-frequency measurement threshold;

wherein the receiving device and the cell change procedure device are configured to perform inter-frequency measurements; and

wherein the cell change procedure device is configured to select the target cell based on the inter-frequency measurements.

23. (Previously Presented) The mobile communication system of claim 17, wherein the receiving device is configured to operate with different radio access technologies; and

wherein the adjusting device is configured to adjust at least one inter- radio access technology measurement threshold;

wherein the receiving device and the cell change procedure device are configured to perform inter-radio access technology measurements; and

wherein the cell change procedure device is configured to select the target cell based on the inter-radio access technology measurements.

24. (Previously Presented) The mobile communication system of claim 17, wherein the adjusting device is configured to adjust at least one quality threshold of the neighbour cell;

wherein the receiving device and the cell change procedure device are configured to measure quality of the serving cell;

wherein the cell change procedure device is configured to trigger measurements on the neighbour cell based on the measured quality of the serving cell;

wherein the cell change procedure device and the receiving device are configured to measure the quality of the neighbour cell;

wherein the cell change procedure device is configured to form the candidate cell selection based on the measured quality of the neighbour cell and the quality threshold of the neighbour cell; and

wherein the cell change procedure device is configured to select the target cell based on the candidate cell selection.

25. (Previously Presented) The mobile communication system of claim 17, wherein the adjusting device is configured to adjust at least one quality offset of the serving cell;

wherein the receiving device and the cell change procedure device are configured to measure the quality of the serving cell;

wherein the cell change procedure device are configured to apply the quality offset of the serving cell to the measured quality of the serving cell, thus producing an offset-applied quality of the serving cell;

wherein the cell change procedure device and the receiving device are configured to measure the quality of at least one neighbour cell; and

wherein the cell change procedure device is configured to select the target cell based on the measured quality of the neighbour cell, and the offset-applied quality of the serving cell.

26. (Previously Presented) The mobile communication system of claim 17, wherein the adjusting device is configured to adjust at least one quality offset of the neighbour cell;

wherein the receiving device and the cell change procedure device are configured to measure the quality of the serving cell;

wherein the cell change procedure device and the receiving device are configured to measure the quality of at least one neighbour cell;

wherein the cell change procedure device is configured to apply the quality offset of the neighbour cell to the measured quality of the neighbour cell, thus producing an offset-applied quality of the neighbour cell; and

wherein the cell change procedure device is configured to select the target cell based on the measured quality of the serving cell, and the offset-applied quality of the neighbour cell.

27. (Previously Presented) The mobile communication system of claim 17, wherein the adjusting device is configured to adjust at least one temporary quality offset of the neighbour cell and a penalty time of the neighbour cell;

wherein the receiving device and the cell change procedure device are configured to measure the quality of the serving cell;

wherein the cell change procedure device and the receiving device are configured to measure the quality of at least one neighbour cell;

wherein the cell change procedure device is configured to apply the quality offset of the neighbour cell for the duration of the penalty time to the measured quality of the neighbour cell, thus producing a temporary offset-applied quality of the neighbour cell; and

wherein the cell change procedure device is configured to select the target cell based on the measured quality of the serving cell, and the temporary offset-applied quality of the neighbour cell.

28. (Previously Presented) The mobile communication system of claim 17, wherein the adjusting device is configured to adjust at least one element of the control information to assumed capacity requirements of the mobile communication system.

29. (Previously Presented) The mobile communication system of claim 17, wherein the adjusting device is configured to adjust at least one element of the control information based on an assumed cell load in the serving cell.

30. (Previously Presented) The mobile communication system of claim 17, wherein the serving base station and the neighbour base station are configured to form a hierarchical cell structure such that the serving cell and the neighbour cell belong to the same hierarchical cell structure;

wherein the adjusting device is configured to adjust the prioritising information;

wherein the control device is configured to re-prioritise the serving cell and the neighbour cell based on the adjusted prioritising information; and

wherein the cell change procedure device is configured to perform the cell change procedures based on the re-prioritising.

31. (Previously Presented) The mobile communication system of claim 17, wherein the receiving device and cell change procedure device are configured to camp on the serving cell in one of the following idle states specified in third generation partnership

project specifications: idle mode, CELL_FACH state, URA_PCH state, CELL_PCH state.

32. (Previously Presented) The mobile communication system of claim 17, wherein the network part comprises separate base station controllers for the serving base station and the neighbour base station.

33. (Currently Amended) A network element of a mobile communication system, which comprises:

a serving base station configured to form a serving cell;

a neighbour base station configured to form a neighbour cell; and

a user equipment camped on the serving cell in an idle state and comprising a receiving device configured to receive signals from the serving base station and from the neighbour base station, the user equipment further comprising a cell change procedure device configured to perform cell change procedures based on control information, and a control device configured to control cell change procedures with control information, said cell change being conducted from the serving cell to a target cell, the network element further comprising an adjusting device configured to adjust at least one element of said control information according to a predetermined time pattern comprising time elements having a characteristic profile in terms of the state of the mobile communication system, thus forming adjusted control information.

34. (Cancelled)

35. (New) A method, comprising:

providing, in a network element of a mobile communication system, control information controlling cell change procedures of a user equipment camping in an idle state on a serving cell formed by a base station;

adjusting at least one element of said control information according to a predetermined time pattern comprising time elements having a characteristic profile in terms of the state of the mobile communication system, thus forming adjusted control information;

transmitting the adjusted control information to the user equipment; and

controlling the cell change procedures based on the adjusted control information.

36. (New) A network element of a mobile communication system, comprising

a control unit configured to provide control information controlling cell change procedures of a user equipment camping in an idle state on a serving cell formed by a base station; and

an adjusting device configured to adjust at least one element of said control information according to a predetermined time pattern comprising time elements having a characteristic profile in terms of the state of the mobile communication system, thus forming adjusted control information,

wherein the control unit is further configured to transmit the adjusted control information to the user equipment and control the cell change procedures based on the adjusted control information.

37. (New) A network element of a mobile communication system, comprising
means for providing control information controlling cell change procedures of a user equipment camping in an idle state on a serving cell formed by a base station;

means for adjusting at least one element of said control information according to a predetermined time pattern comprising time elements having a characteristic profile in terms of the state of the mobile communication system, thus forming adjusted control information;

means for transmitting the adjusted control information to the user equipment; and

means for controlling the cell change procedures based on the adjusted control information.

38. (New) A computer program embodied on a computer readable medium, the computer program comprising program code for controlling a processor to execute a method comprising:

providing, in a network element of a mobile communication system, control information controlling cell change procedures of a user equipment camping in an idle state on a serving cell formed by a base station;

adjusting at least one element of said control information according to a predetermined time pattern comprising time elements having a characteristic profile in terms of the state of the mobile communication system, thus forming adjusted control information;

transmitting the adjusted control information to the user equipment; and

controlling the cell change procedures based on the adjusted control information.